



Research Paper

Rural Development and Transformation of Living Environment in Bhopal Region, Madhya Pradesh

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Abstract:

Living environment here refers to the quality of life of people living in a certain geographical area and the basic amenities available to them. Rural development has been a major focus of Indian planning process since independence. To achieve this objective, many rural development programs were launched as a result of which the process of transformation and the development of traditional rural areas started. After independence, the Indian government has taken many steps in the direction of rural development and certainly these programs have proved helpful in eliminating poverty and unemployment among the rural people of India. The aim of the present study is to study the transformation of Bhopal region and its adjoining rural areas under the various developmental activities and programs implemented during five-year plans. The present study is based on mainly field based micro level primary data. Data and related information have been collected from field surveying, district gazetteer and other literature related with the Bhopal region. Rural development programme and schemes implemented in the study region has transformed the quality of life of the people living in the villages of study region.

Keywords: Development Programme, Environment, Facilities, Transformation, Village

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I. INTRODUCTION

Rural development is initially a process of rural transformation. Rural development is a strategy designed to improve the economic and social life of the rural poor and to extend the benefits of development in rural areas (Mittal, 1995). Rural development controls overall development of rural areas with a view to improve the quality of life of rural people. In this sense it is a multidimensional concept and encompasses the development of agriculture and allied activities in the village, economic infrastructure, community services and facilities (Singh, 1986). Rural development is to overcome the economic, social and other problems prevalent in rural areas by organizing perfect rural environment and taking them on the path of progress so that they too can get the opportunity to lead a happy life. According to the economics of rural development, the main goal of development is the development of human beings so that their living standards and livelihood can be improved. This is possible only when everyone is helpful and engaged in the development work. To understand the rural transformation one must look in to the origin of rural areas with respect to cultural heritage and its contact with other rural societies this will further help to highlight the roots in contemporary institution including land, kinship and agriculture (Vishwakarma and Jain 2008).

Rural areas are considered as regions of natural scenery, environment in its purest form and rural people live with simple way of life. Mentioning the features of rural areas in the ancient text *Markande Purana*, it has been written that the place where agriculture is done and the agricultural area is very rich known as a village. Rural settlements are small in size where limited population resides and most of the people are engaged in agriculture and other allied primary activities. Indian rural life has been suffering from poverty for years, hence there is a lack of basic facilities and the standard of living of the people is very low. Rural community of India is facing numerous problems and even a large number of rural populations is away from the basic need of food, house and cloths. Keeping these things in mind, many schemes and programs for rural development were started under various five-year plans.

The main goal of the rural development initiatives is to improve the living standard and quality of life for those living in rural areas. In this way the welfare of population has been the primary goal of all the rural development programs. Under the various five year plans a broad range of activities and programs have been implemented to reduce poverty and assure in the improvement of the living standard of the rural residents. High priority was given on education facilities, health, drinking water, housing, sanitation and other basic amenities. Rural development implies both the economic betterment of people as well as social and infrastructural transformation. Implementation of various development activities and programs in the study region have been helpful in improving the living standard of the rural people. Effort have been made to provide employment opportunities at minimum wages to the people and access to education, health services and other basic amenities such as housing, electricity, drinking water, sanitation and transport.

II. OBJECTIVES OF THE STUDY

The objectives of the study mainly include:

1. To study the development programs being implemented in the study region.
2. To study the impact of development programs in transformation of living standard of locals of the study region.
3. To study the role of infrastructure development in the transformation of rural activities.

III. MATERIAL AND METHODS

Rural transformation is a popular field among the scholars, but field based micro level studies are extremely few. The Present research work is based on the field base study of the Bhopal region Madhya Pradesh. For the purpose Libraries of various universities, and Government departments have been consulted to study the relevant literature and to collect the required information from books, journals, periodicals, unpublished Ph.D. thesis and reports of various government departments. The present study is based on both primary and secondary data. As per the requirement and objectives of the study primary data have been collected using village questionnaire and household questionnaire design for the purpose. Data have been collected by interviewing with the selected sample respondents and village level government functionaries of the sample villages using schedule and observation. Secondary data and general information related to physiography, population, agriculture, various development schemes and programs have been collected from district gazetteer Bhopal, District census hand book Bhopal, district statistical handbook's Bhopal, and annual reports of DRDA / Zila Panchayat and through internet services. Simple statistical methods i.e. average, mean cross tables were used to process the data and these data have been presented through tables and using various cartographic methods. During field work data related with house types, sanitation, drinking water facility, occupational structure, fuel used for cooking and use of vehicle has been collected to measure the transformation of living environment.

IV. SELECTION OF SAMPLE VILLAGES AND RESPONDENTS

Bhopal region under study has 232 revenue villages. It was difficult to cover all the villages in a limited time therefore 23 villages have been selected as sample village by using multistage random sampling method. For this purpose whole study region has been divided into 8 sectors and 7 circular zones considering the distance and direction from the centre. At the first stage 20 percent village were selected and at the second stage finally 23 (10 percent) villages have been selected for the present study. Amoni, Babadiya Khurd, Barkhedi Abdulla, Berkhedi Bejyaft, Bhojnagar, Borkhedi, Chandukhedi, Daulatpura, Develkhedi, Garhmurra, Hinotita Alam, Intkhedi Chhap, Jhirmiya, Manikhedi Kot, Mugaliya Haat, Nipaniya Jaat, Parvaliya Saani, Pipaliya, Ratanpur, Saistakhedi, Samaspura, Semrikhurd and Sewaniya Onkar villages have been selected as sample village. These villages are located within the distance of three to twenty five kilometres from the district headquarter. About 9.85 percent of the total households have been selected as sample households. For this purpose, sample villages have been divided into three categories - Villages with less than 100 households, Villages with 100-200 households and Villages with more than 200 households. And then 15 percent household from the first category, 10 percent from the second category and 5 percent from the third category households have been selected for final interview.

V. STUDY REGION

Bhopal region have been selected as study region. Geographically Bhopal region lies between 23°4' - 23°27' north latitudes and 77°0' - 77°37' east longitudes. The study region is lies on the eastern part of the Malwa plateau. It covers an area of 1216.3 sq. kms.. The name Bhopal is derived from the Bhoj-tal, a lake within the limits of city. Bhopal was the part of Sehore district later on it was made a separate district on 2 October 1972. The region is bounded by the district on the northwest by Vidisha, on the west and south by Sehore, on the south and east by Raisen and on the north west by the Rajgarh district.

The region is can be divided into two physiographic division-

- 1.The Vindhyan Hill Range
- 2.The Malwa Plateau

The hill system of the region is formed by the great Vindhyan range and numerous spurs which strike out from the main chain. The average elevation of the in the south ranges from 1800 to 2000 feet, Singorholi near Lalghati is about 625 meter high and is the highest point in the study region .North of Vindhyan scarps and the hill range lies a large plateau caved with Deccan trap ,lava and ash beds from the thickness parts of the series.The average height of the Malwa plateau is 450 meter mostly sloping towards north.The region ir drained by Kaliyasot, Halali and Patra river later these river join Betwar river. The region has moderate climate and belongs to subtropical type. The climate of the region is divided in to four seasons, the summer season from March to mid June, rainy season mid June to mid September ,autumn season from mid September to November and winter season from December to February. January is the coldest month with average temperature of 18.5 C and may is the hottest month with 44 C. The average rainfall in the region is 1260.2 MM.

The forest of the region are southern subtropical dry deciduous with dry deciduous shrub forest. The species of the trees found in the region include teak, *dhaora*, *salai*, *saj*, *mahuwa*, *semal*, *haldu* and *tendu*. According to 2011 census region is accommodating more than 2371061 person while in 2023 Bhopal district population is 3295775 estimated as per Adhar Udai.

Rural Development Programs Implemented under Study Region:

The development programs in the region mainly include

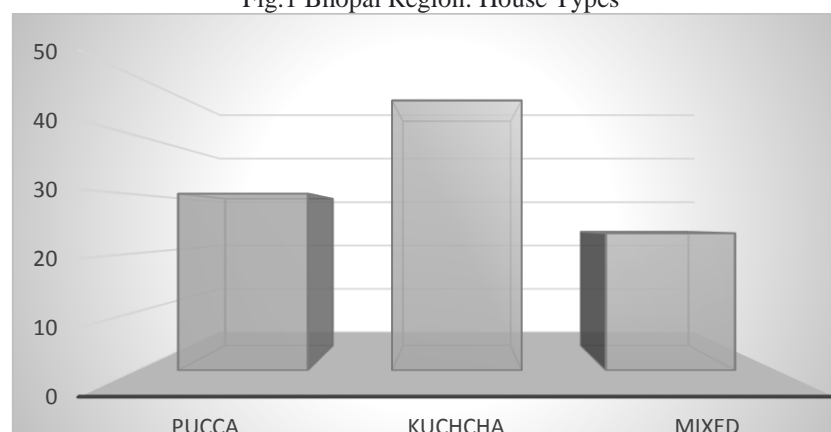
1. Integrated Rural Development Program (IRDP)
2. Jahawar Rajgar Yojna
3. Prime Minister's Rojgar Yojna
4. Rural Sanitation Program
5. Swarna Jayanti Gram Swarojgar Yojna
6. Prime Minister Rural Road Scheme
7. National Rural Employment Guarantee Act
8. Indira Awas and Pradhanmantri Awas Yojna

VI. RESULTS AND DISCUSSIONS

The process of transformation being caused by the developmental programs has affected the quality of life of the residents of sample villages. Urbanization, educational level and changes in their income has also affected the quality of life in the study region.

1. House Types: In the study region more than 99.26 per cent of the total households are living in their own house and only 0.73 per cent households are living in rental house. On the basis of material used for the construction of houses these houses are classified as pucca, kuchcha and mixed type. In the study region about 45.95 percent respondents are living in kuchcha house, about 30.14 percent lived in pucca houses while remaining 23.91 percent respondents are living in the mixed type houses. Among the sample villages the highest proportion of kuchcha houses are found in Samaspura village with 70.5 percent while minimum proportion of kuchcha house was found in Ratanpur village with only 16.75 percent respondents are living in kuchcha houses followed by Saistakhedi with 18.0 percent. In remaining sample villages the proportion of kuchcha house varies from 33.5 percent to 52.34 percent. In the study region 30.45 percent respondents are living In pucca houses. The proportion of pucca houses ranges from 15.35 percent to 73.75 per cent. Among the sample villages Ratanpur village has highest proportion of pucca house as more than 73.75 percent residents are living in pucca house .In most of the sample villages the proportion of pucca houses varies from 25.0 to 37.0 percent (Fig 1).

Fig.1 Bhopal Region: House Types



Source: Based on household questionnaire

II. Drinking Water Facility: The quality of health and environmental hygiene depends on the quality and the source of drinking water. In most of the sample villages handpumps and tubewells are the main source of drinking water. In the study region about 31.0 percent of the total households has their own drinking water facility and most of them have tubewells as source of drinking water facility. About 43.75 percent respondents of the Ratanpur village have their own drinking water facility which is highest proportion among the sample villages. Respondents of Hinotiya Alam, Semrikhurd, Mugaliya Haat and Intkhedi Chhap have own drinking water facility with 31.25 to 41.00 percent. In fifteen sample villages the proportion of own drinking water facility is very low it found between 11.0 to 29.0 percent. About 69.0 percent respondents of the sample villages depends on the public handpumps as well as dug wells for drinking water facility. More than 80 percent respondents of the Barkhedi Abdulla, Jhirniya and Chandukhedi villages depends on public source of drinking water and in thirteen sample villages it found between 65.0 to 75.0 percent.

III. Fuel Used: Fuel used for cooking is an important material in every household. Firewood, cow dung cake and wastage of crops were the main source of the fuel in rural areas since long but now people have gradually started the use of LPG. Char coal, kerosene, biogas and electricity is also used as fuel. Among the respondents of sample villages about 58.69 percent are using fire wood or cow dung cake and more than 33.86 percent households are using LPG while the proportion of kerosene is 6.35 percent. Only 1.10 percent households are also using other type of fuel such as solar energy and biogas. It is found that most of the LPG users are found in those villages which are situated near Bhopal city. Recently the use of LPG in sample villages has gradually increased while the proportion of fire wood is declining because availability of fire wood has emerged as major problem. Among the all sample villages Ratanpur ranks first in LPG users with 56.26 percent households are using LPG as fuel followed by Hinotiya Alam, Barkhedi Bezyaft, Nipaniya Jat and Mugaliya Haat with 37.5 to 50.0 percent. Bhojnagar and Daulatpura villages has less proportion of LPG users.

IV. Occupational Structure: Occupation is the most important economic activity that influence the human life. It also indicates the degree of employment in the region. Occupational structure analysis of the households of the sample villages indicates that most of the respondents are engaged in agriculture and other allied activity such as animal husbandry, agricultural labours, poultry and vegetables cultivation. Some respondents are engaged in household industry, business and other works. It was found that more than 49.45 percent selected respondents are cultivators while about 29.75 percent respondent earn their livelihood as agricultural labours. About 16.37 percent are other workers while only 3.33 percent people were engaged in their traditional household industry. Over the period of time the proportion of cultivators and household industry declined while the proportion of other workers has increased.

V. Toilet Facility: Respondents of the sample villages use open space as toilets for a long time but with the implementation of various scheme related to rural sanitation like samagraswachchhataabhiyan and rural sanitation now they have start constructing toilets in their houses. In the study region about 47.48 percent respondents are using toilets in their houses while 52.52 percent respondents are still use open space. Among the sample villages highest proportion of toilet owned by the respondents is found in Ratanpur village with 58.25 percent. More than fifty percent respondents of the Nipaniya Jaat and Saiastakhedi uses toilet facility in their house. In other sample villages it is found in varying proportion. All the respondents of the Bhojnagar and Daulatpura villages use open space as these villages are very small in size and located in remote area of the study region. About 77.5 percent respondents of Samaspura village uses open space for toilet followed by Develkhedi, Garhmurra, Semari Khurd and Barkhedi Abdulla with 64.68, 62.50, 61.12 and 55.33 percent respectively.

VI. Electrification: Use of electricity is considered as an important indicator of improvement in the quality of life and raises the living standard. Electrification has also transformed the way of life, celebration of festivals, marriage and other activities of the rural people. In the study region 95.60 percent are electrified and only few respondents still do not have valid electricity connection. Highest proportion of households using electricity is found in Ratanpur, Berkhedhi Bezyaft, Nipaniya Jat, Hinotiya Alam, Sevaniya Onkar and Semari Khurd. While Jhirmiya sample village has lowest proportion of respondents using electricity. In the study region electricity is mainly used by domestic sector and agriculture sector. Most of the respondents who own agriculture land are using electric pumps for irrigation. With the help of irrigation they produce vegetables for sell this helped them to increase their income. Electrification has also transformed the way of entertainment now they are various electrical equipment such as television, musical instruments, radio etc.

VII. Ventilation: Ventilation is depending on the number of windows and doors in the house. Number of window and doors with glass or curtains along with material used in floor and roof is also a indicator to gauge the living standard of the people. Ventilation affect the health condition and efficiency of the residents. It was found that most of the pucca houses have proper ventilation as compared to other houses. It was found that about 52.0 percent houses in the study region have proper ventilation and among the residents of sample villages highest proportion of ventilated houses found in Ratanpur village. In Nipaniya Jaat, Mugaliya Haat, Hinotiya Alam and Berkhedhi Bezyaft the proportion of ventilated houses is also high but in Amoni, Daulapura and Bhojnagar the proportion of ventilated house is very low.

VIII. Mode of Transport: Bullock carts, cycles, motorcycles, tractor trolleys are available as mode of transport in the sample villages. Jeep, tempos and buses are also used as public transport in the study region. Among the sample villages out of 23 villages 20 villages are well connected with metaled road while only three sample village are partially connected with unmetalled road. Mugaliya Haat, Nipaniya Jaat, Jhainiya and Ratanpur villages are located on highways and other villages are connected by road constructed under pradhanmantrigraminsadakyojna. It was found that most of the respondents are using more than two or more means of transport. Motorcycle is frequently used as mode of transport in the study region and about 57.35 percent respondents are using motorcycles. Some respondents are also using cycles. Among the sample villages about 47.54 percent households have bicycles along with motorcycles. About 11.61 percent respondents are using jeep or car while more than 18.34 percent are using tractor trolley as mode of transport along with other mode of transport. Some respondents also have bullock carts though these are not in use. The sample villages located on main road enjoy the facility of bus service. Some other villages such as Saistakhedi and Samaspura too are connected with bus service but the frequency of buses is very poor as only one bus makes a single trip.

IX. Means of Entertainment: In the process of rural life transformation the means of entertainment in the sample village also changed. Radio is still a very popular source of entertainment as most of the respondents of the sample villages avail this facility and more than 65.28 percent of selected households have television. With the addition of numerous tv channels, cable network, FM radio and DTH service the entertainment has drastically changed. Means of entertainment influenced the social activities, celebration of festivals and awareness of people which has transformed the lifestyle of the respondents of the study region.

VII. CONCLUSION

Rural development is a strategy designed to improve the economic and social life of the rural poor and to extend the benefits of development in rural areas. The main goal of the rural development initiatives is to improve the living standard and quality of life for those living in rural areas. With the implementation of various development activities and programs in the study region have been helpful in improving the living standard of the rural people. The process of urbanization in the study region also affected the living condition of the respondents. With the increasing income living standard has transformed. Kuchcha houses are converted in to pucca houses with all the basic facilities such as drinking water, toilet facility, ventilation and electrification. Means of transport also have changed. Number of two-wheeler and four-wheeler is increasing. Means of entertainment has also transformed.

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